

What is claimed is:

1. A brazing filler metal having a composition comprising palladium, metal having homogeneous solubility with the palladium, and phosphorus as main constituents thereof, wherein a composition ratio of the phosphorus falls
5 within a range of 2 wt. % to less than 20 wt. %.

2. A brazing filler metal having a composition comprising palladium, platinum, nickel, and phosphorus as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of 2 wt. % to less than 20 wt. %.

10 3. A brazing filler metal according to Claim 2, wherein a composition ratio of the platinum falls within a range of 4 to less than 86 wt. %.

4. A brazing filler metal according to Claim 2, wherein a composition ratio of the nickel falls within a range of 4 to less than 36 wt. %.

15 5. A brazing filler metal according to Claim 3, wherein a composition ratio of the nickel falls within a range of 4 to less than 36 wt. %.

6. A brazing filler metal according to Claim 5, wherein a composition ratio of the phosphorus falls within a range of about 3 to about 17 wt. %.

7. A brazing filler metal according to Claim 5, wherein a composition ratio of the platinum falls within a range of about 5 to about 85 wt. %.

20 8. A brazing filler metal according to Claim 5, wherein a composition ratio of the nickel falls within a range of about 5 to about 32 wt. %.

9. A brazing filler metal having a composition comprising palladium, copper, nickel, and phosphorus, as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of about 4 to about
25 18 wt. %.

10. A brazing filler metal according to Claim 9, wherein a composition ratio of the copper falls within a range of about 2 to about 64 wt. %.

11. A brazing filler metal according to Claim 9, wherein a composition ratio of the nickel falls within a range of about 7 to about 36 wt. %.

12. A brazing filler metal according to Claim 10, wherein a composition ratio of the nickel falls within a range of about 7 to about 36 wt. %.

5 13. A brazing filler metal having a composition comprising palladium, gold, nickel, and phosphorus, as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of 2 to less than 20 wt. %.

10 14. A brazing filler metal according to Claim 13, wherein a composition ratio of the gold falls within a range of 2 to less than 60 wt. %.

15 15. A brazing filler metal according to Claim 13, wherein a composition ratio of the nickel falls within a range of 4 to less than 32 wt. %.

16. A brazing filler metal according to Claim 14, wherein a composition ratio of the nickel falls within a range of 4 to less than 32 wt. %.

17. A brazing filler metal according to Claim 16, wherein a composition ratio of the phosphorus falls within a range of about 3 to about 19 wt. %.

18. A brazing filler metal according to Claim 16, wherein a composition ratio of the gold falls within a range of about 3 to about 59 wt. %.

20 19. A brazing filler metal according to Claim 16, wherein a composition ratio of the nickel falls within a range of about 5 to about 31 wt. %.

20. A brazing filler metal having a composition comprising platinum, metal having homogeneous solubility with the platinum, and phosphorus, as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of about 4 to about 21 wt. %.

25 21. A brazing filler metal having a composition comprising platinum, copper, nickel, and phosphorus, as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of about 4 to about

19 wt. %.

22. A brazing filler metal according to Claim 21, wherein a composition ratio of the copper falls within a range of about 2 to about 66 wt. %.

5 23. A brazing filler metal according to Claim 21, wherein a composition ratio of the nickel falls within a range of about 7 to about 36 wt. %.

24. A brazing filler metal according to Claim 22, wherein a composition ratio of the nickel falls within a range of about 7 to about 36 wt. %.

10 25. A brazing filler metal having a composition comprising platinum, gold, nickel, and phosphorus, as main constituents thereof, wherein a composition ratio of the phosphorus falls within a range of about 4 to about 21 wt. %.

26. A brazing filler metal according to Claim 25, wherein a composition ratio of the gold falls within a range of about 5 to about 62 wt. %.

15 27. A brazing filler metal according to Claim 25, wherein a composition ratio of the nickel falls within a range of about 5 to about 22 wt. %.

28. A brazing filler metal according to Claim 26, wherein a composition ratio of the nickel falls within a range of about 5 to about 22 wt. %.